Russian Journal of General Chemistry 2000 vol.70 N10, pages 1603-1609

Complexes of n-diisopropoxythiophosphoryl--´-phenylthiourea with a series of thiophilic metals

Brus'ko V.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Potassium salts of N-diisopropoxythiophosphoryl-N′-phenylthiourea and diisopropoxyphosphoryl-thiobenzamide react with metal salts to form complexes [PhNHC(S)NP(S)(OPr-i)2]2 (M=Cd, Zn, Co, Hg, Pb) and [PhC(S)NP(O)(OPr-i)2]2Cd, whose structure was established by physicochemical methods. The complexes of Cu(II), Pb(II), and Hg(II) with the first ligand were found to be less stable than with the second. The high 4JPH coupling constants (up to 8.0 Hz) for certain complexes is explained by the favorable configuration of the ligand and the presence of multiple bonds. ©2000 MAIK "Nauka/Interperiodica".